

REMARKS

Claims 1 – 24 and 27 – 30 are pending and at issue. Applicant appreciates the examiner's reconsideration of the election/restriction requirement and the examiner's regrouping of the claims. Applicant confirms the election of claim group I, which includes claims 1 – 24 and 27 – 30.

Of the pending claims, the action rejects claims 1, 2, 4 – 7, 9, 12 – 14 and 16 – 24 under 35 U.S.C. §102 as anticipated by *Gilliland et al.* (U.S. Patent No. 6,349,105). The action rejects claims 3, 8, 10, 11, 15 and 27 – 30 under 35 U.S.C. §103 as obvious over *Gilliland et al.* In light of the foregoing amendments and following remarks, applicant respectfully traverses these rejections and requests reconsideration.

Gilliland et al. merely teaches a standard optical assembly that uses a can (430) having both a cover and four side walls to hermetically seal the underlying optical components. As is readily apparent from figure 15, this can (relied upon by the office action as teaching the substantially flat cover) has a large vertical dimension and thus cannot be said to be substantially flat. On the contrary, the required side walls of the can extend from the top surface, past the devices 470 and 480, and onto the substrate 400, where the can is supported.

In contrast to the can configuration of *Gilliland et al.*, the present application describes approaches where the metal (seal) member itself has a vertical height sufficient to support a substantially flat cover entirely above the underlying electronics. The examples allow for much easier manufacturing of the cover, because the cover can be quickly formed or stamped from a flat sheet. Furthermore, the cover may be formed of materials that are otherwise difficult to form (e.g., bend) into a can shape. The examples also allow the seal member to have sufficient height to encircle and thus protect the underlying devices located within an inner region of the seal member. By having a seal member of sufficient height to support a flat cover above these devices – instead of supporting a can directly on the substrate – the assembly process may be improved, because the seal member protects the devices against damage or misalignment as can occur when attaching the can directly to the insulating

base. The devices are protected by the vertical extent of seal member, thus the flat cover may be attached to the seal member without interference.

To clarify the recited subject matter, applicant has amended each of the independent claims to recite (albeit in slightly different form across some of the claims) “wherein the flat metal cover is supported above the optoelectronic device by the top wall of the metal member.” As discussed above, *Gilliland et al.* does not disclose, teach or suggest such subject matter, but rather just the opposite. Figure 15, for example, shows the side view of the configuration in Figure 14; and is it readily apparent that can 430, diode 480, and monitor diode 470 are all mounted to the same surface of the substrate 440. The same is true for the configurations of figures 17 – 19. The can (430) is not supported by the region (441) above the electronics (470 and 480) in any of these configurations. The only configuration of *Gilliland et al.* that arguably shows a can supported above an optical device is the configuration of figures 10 – 12, but this configuration is not relevant to the claims because it requires a substrate recess for device mounting. The examples of figures 10 – 12 do not teach an assembly where both an optoelectronic device and a metal member are attached/mounted to the same upper surface of an insulating base, and which further supports a flat cover above the optoelectronic device.

In light of the foregoing, applicant respectfully asserts that *Gilliland et al.* does not disclose, teach or suggest the subject matter of independent claim 1, which recites a low-profile package for housing an optoelectronic device, comprising: an insulating base having an upper surface, wherein an optoelectronic device is mounted to the upper surface of the insulating base; a metal member having a top wall and a bottom wall, wherein the bottom wall of the metal member is attached to the upper surface of the insulating base; and a substantially flat metal cover attached to the top wall of the metal member to hermetically seal the metal cover to the insulating base, wherein the flat metal cover is supported above the optoelectronic device by the top wall of the metal member.

Further, the foregoing establishes that *Gilliland et al.* does not disclose, teach, or suggest the subject matter of independent claim 19, which recites a method for hermetically sealing a substantially flat metal cover to an insulating base, comprising: attaching a bottom wall of a metal member to an upper surface of the insulating base;

mounting an optoelectronic device to the upper surface of the insulating base, wherein the optoelectronic device is located within an inner region of the metal member; positioning the substantially flat metal cover over the optoelectronic device; and attaching the substantially flat metal cover to a top wall of the metal member to hermetically enclose the optoelectronic device, wherein the flat metal cover is supported above the optoelectronic device by the top wall of the metal member.

Likewise, the foregoing establishes that *Gilliland et al.* does not disclose, teach, or suggest the subject matter of independent claim 27, which recites a packaged optical module, comprising: a base formed of an electrically insulating material and having at least a first surface and a second surface, wherein an optical device is mounted to the first surface of the base; a sealing member formed of an electrically conducting material and attached to the first surface of the base, wherein the sealing member extends along a perimeter of the base with the optical device being located within an inner region of the sealing member; a heat dissipating device attached to the second surface of the base; and a substantially flat cover formed of the electrically conducting material, wherein the substantially flat cover is attached to the sealing member on the base to provide a hermetic enclosure for the optical device, wherein the flat metal cover is supported above the optical device by the sealing member.

The rejections of all pending claims are traversed.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated: November 22, 2006

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